

The Informed Executive



“Education, education, education.” Easy rhetoric to rouse the party faithful at the start of a new government, or a serious commitment to bring education to the forefront of that government’s policy portfolio? A decade on, there is sufficient evidence to suggest that it was a commitment that materialised into an investment in manpower and resources across the educational spectrum. Spending per pupil has increased 55% in real terms since 1997, for example, there are 35,000 more teachers and an additional 172,000 teaching assistants employed.

It is also a matter of record that educational performance on the accepted criteria has improved in the same period. The proportion attaining five good GCSEs including English and Maths increased from 36% to 45%, for example. How far any specific policy initiative contributed to part or all of that improvement is a matter for conjecture, however.

In the absence of more detailed analysis, The Informed Executive cannot meaningfully contribute to that debate. Our business is about providing verifiable information, and helping executives apply it to improve the quality of their decision-making. From the outset, the magazine’s target has been the executive management of the UK’s smaller and medium sized businesses. By choosing to investigate aspects of the education sector in this edition, that target has not changed, even though the range of businesses addressed may have been broadening out.

Schools have progressed a long way in the past ten years, in terms of the control they

exercise over their own budgets. Every one of those establishments is an SME on the basis of their turnover and number of staff employed. None sets out to make a profit, of course, but they work hard to manage their affairs and ensure that any surplus which might be generated is absorbed by additional expenditure on resources for the school.

Running one of these businesses is not an easy task, and the added burden of being its CEO on top of teaching responsibilities has been enough to hold back many aspiring head teachers from applying for the top post.

There is now a welcome trend towards appointing executives with experience of the private sector as business managers or bursars, freeing up the teaching staff and ensuring that every opportunity is pursued to boost the schools’ operating income. In the process, that will involve securing maximum funding from non-government grants and initiatives, and maintaining strict control over their operation’s overheads.

Sustainability in schools

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Jim Knight MP, Minister for Schools & Learners (right)



The two aspects of education which The Informed Executive has chosen to focus upon in this edition are sustainability and ICT. On the first of these themes, we consider how far a school can proceed towards the sustainability of its operations.

Is it indeed a goal that can reasonably be pursued when it involves a complete change in the way that a school manages its affairs? If the concept of sustainability is taken to its logical conclusion, that goal can never be reached until the school has been totally double-glazed, for example, the building compartmentalised into efficient micro-climates and heated from renewable sources, and every plastic seat in the school replaced by sustainable wooden chairs.

Starting on page 16, we spend some time examining how one English county council – Hertfordshire - has turned sustainability and energy management into an art form by changing the ‘culture’ of energy consumption across the whole of its estate – more than half of which is accounted for by school buildings in the county.

It includes a school which makes reasonable claim to be the first fully eco-school in the UK. Significantly, that establishment is the first building in the world to be heated by a UK-developed technology which stores heat underground in the summer to bring back to the surface in the winter.

Zero-Carbon Task Force

Sustainability in the schools sector is a long-term policy goal of the Department for Children, Schools and Families. In June 2008, Secretary of State Ed Balls MP launched the

Zero Carbon Task Force – which is advising ministers on building zero-carbon school buildings by 2016.

Expressions of interest have been invited from local authorities for projects in new or existing buildings which explore new approaches to reducing energy demand and which engage building users in their proposals.

We asked Schools Minister Jim Knight MP why it had been felt necessary to establish a dedicated taskforce when there are initiatives already in place – Building Schools for the Future, for example, and the Carbon Trust’s schools programme – which have within their brief the reduction of carbon emissions from school buildings which are being re-furnished or re-built.

According to the Minister, “This will be the most ambitious design and building initiative the school system has ever faced. This expert task force drawn from the construction, sustainability and education sectors will help us overcome the technical, design and construction challenges over the next eight years.

“The fact is that we have a clear moral responsibility to future generations to make it happen. We can no longer sit back and wait for the science to catch up with us – it would be a dereliction of duty if we did.”

Both the Carbon Trust and the DCSF maintain that around 20% of energy consumption can be saved in schools by quite simple actions, which include data monitoring to track energy saving strategies.

Carbon Trust initiative

On page 38 of this edition, we consider how the Carbon Trust is now working with schools as an extension to its highly successful Local Authorities Carbon Management Programme. The management of energy and carbon emissions is clearly central to a school's ability to achieve sustainability within a reasonable timeframe.

Tom Cumberlege, the Public Sector Manager at the Carbon Trust responsible for the scheme is on record stressing that data on energy consumption, which will be used as the basis for proceeding with carbon reduction programmes, should be produced rapidly and cost-effectively. He told The Informed Executive that he was keen to encourage schools to adopt procedures which achieve that goal.

Data Monitoring

Both the Carbon Trust and the DCSF maintain that around 20% of energy consumption can be saved in schools by quite simple actions. What data monitoring achieves is both a base point from which energy saving strategies can be evolved, and a means of tracking subsequent consumption. on the part of the schools 'community',

A web browser bridges the gap between the data being monitored and those able to influence the subsequent actions. This makes it easier for school children in particular to understand the link between their efforts and the amount of CO₂ being saved, for example, or the spending power of the cost savings in terms of extra sports equipment or school books.

Minister welcomes commitment

Jim Knight welcomed the commitment made by schools across the country to control their energy consumption both as a contribution to improved sustainability, and to cost reduction. "We have already made significant steps to cutting carbon use in schools – backed by our unprecedented capital investment in schools, as well as other initiatives giving local authorities a statutory responsibility to cut car use on the school run.

"But it is the small things that schools can do day-in day-out which will make the real

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difference – from simple energy and water conservation; using natural ventilation and light; promoting cycling and walking to school."

Energy costs and carbon emissions apart, there is also the benefit that information collected during energy monitoring provides a valuable feedstock for lessons across a range of subjects in the curriculum. According to Mick Waters, the Director of Curriculum at the Qualifications & Curriculum Authority (QCA), some subjects lend themselves more readily than others to accommodating sustainability.

He believes that it is not difficult to bring data on energy consumption and climate change into the teaching of mathematics, for example.

"In geography lessons, there is scope for assessing how the world's population has adapted to climatic conditions and the changes in natural resources which result. Other academic subjects may need more careful thought about how to include sustainability, but it can be achieved."

Knight supports curriculum changes

This inclusive approach was one that Mr Knight supported, as it brought awareness of climate change issues firmly into the classroom and, by extension, into the communities of which the children are a part.

"The curriculum is evolving to meet a rapidly changing world, and enable teachers to teach in a way that will continue to interest and enthuse their pupils – that's why we've introduced a new secondary curriculum this year for 11 to 14-year-olds which puts climate change and sustainable development at the heart of children's learning.

"We're moving away from a 'one size fits all' curriculum to one that offers more flexibility to tailor teaching to pupils' needs and aspirations."

Evolving role of school ICT

“Schools are revolutionising how they educate faster than many families realise. There is no substitute for good classroom teaching but day-to-day school work is increasingly web and computer based – and it is clear that students get better results where technology is used effectively at home and school to study, research and communicate.”

Reference on page 7 to children accessing energy data over the internet illustrates how far ICT has become an integral part of school-level education. It is highly appropriate, therefore, that the second strand of this edition should be looking at schools making more effective use of ICT in their teaching and administration.

Senior education figures like Mick Waters of the QCA are clearly in favour of this development. “We would expect children to be familiar with technologies such as laptops, palm-held devices and internet access, so that they can make ICT a powerful vehicle for studying other subjects.”

But he was equally confident about the role that ICT has in helping children communicate effectively. “Children take word processing for granted and use it with ease. By Key Stage 2, spreadsheets are widely used as they provide a vehicle for the data which will be used in many different classroom subjects.

“There is a concern that if they cannot use a spreadsheet by that stage, they will be held back in those subject areas. That is true of graphics and presentation software as well. It is important, therefore, that there is complete confidence in using those tools.”

ICT complements teaching

That point about skills highlighted by the QCA was taken up by Jim Knight. “Schools are revolutionising how they educate faster than many families realise. There is no substitute for good classroom teaching but day-to-day school work is increasingly web and computer



based – and it is clear that students get better results where technology is used effectively at home and school to study, research and communicate.”

Atom-based computers

As part of our ICT analysis, we were keen to assess the implications for education, particularly at the primary level, of a new generation of microprocessor that was launched earlier this year.

Significantly, most of the world’s laptop manufacturers have seen fit to create a range of lightweight ‘child-friendly’ devices with a small footprint specifically for that audience, based on the new chipset.

From the school decision-maker’s perspective, all of those vendors’ kit reaches the market at a price which would make it relatively easy to equip an entire class of six year-olds with such technology. No less important, power consumption has been cut by 80%, improving schools’ sustainability credentials in the process.

But school managers have to act responsibly when they come to invest in ICT solutions, and we discussed the implications with Becta, the Government agency responsible today for advising on purchasing in this field. The agency produces specifications and, in some areas of the subject, establishes framework purchasing agreements.

We have looked in some depth at the nationally-funded Magellan Initiative in Portugal. This is a programme for providing 650,000 primary school children in that country with one of the ‘netbook’ PCs, which have been built there.

Minister’s support for UHA

It is inevitable that comparisons are drawn between Magellan and the £300 million Universal Home Access (UHA) scheme in the UK and announced in October. Becta will be managing the project and has called for expressions of interest from potential suppliers.

Schools Minister Jim Knight was keen to demonstrate the breadth of approach being pursued by the UHA initiative: “Bridging the digital divide is not just about giving parents who cannot afford home IT a financial leg-up – it is about selling the educational benefits of home computer and internet access far better to those that can afford it.

“There has to be a culture where families see home access is as important as making sure their children have pen, paper and calculator at school. The bottom line is that having home access to the internet or a computer is no longer an optional extra for school work – it is fast becoming essential.” §

From the school decision-maker’s perspective, lightweight computers based on the Intel Atom chip are reaching the market at a price which would make it relatively easy to equip a class of six year-olds